

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A process for producing fine metal oxide particles which process comprises vaporizing a mixed solution of an organometallic compound and an organic solvent to obtain a gaseous mixture, and subjecting the a-gaseous mixture organometallic compound to combustion in a gas phase in the presence of an oxidizing substance.

2. (withdrawn): A process for producing fine metal oxide particles which process comprises mixing a gaseous organometallic compound with an oxidizing substance to prepare a mixture and subjecting the mixture to combustion.

3. (withdrawn): A process for producing fine metal oxide particles which process comprises mixing an organometallic compound solution with an oxidizing substance to prepare a mixture, making the mixture into a gaseous state and then subjecting the gaseous mixture to combustion.

4. (withdrawn): A process for producing fine metal oxide particles which process comprises mixing an oxidizing substance with a gaseous organometallic compound prepared by vaporizing an organometallic compound solution to prepare a mixture and then subjecting the mixture to combustion.

5. (previously presented): The process for producing fine metal oxide particles according to claim 1 wherein the oxidizing substance comprises at least one selected from an oxygen-containing gas, oxygen, water and nitrous oxide.

6. (canceled).

7. (withdrawn): The process for producing fine metal oxide particles according to claim 3 wherein the solvent of the organometallic compound solution is a combustion improver.

8. (previously presented): The process for producing fine metal oxide particles according to claim 1 wherein the organometallic compound comprises at least a metal, a carbon and a hydrogen atom.

9. (previously presented): The process for producing fine metal oxide particles according to claim 1 wherein the organometallic compound comprises at least one compound selected from an alkyl metal compound, a metal alkoxide and a β -diketone metal complex.

10. (original): The process for producing fine metal oxide particles according to claim 9 wherein an alkyl group of the alkyl metal compound has 1 to 10 carbon atoms.

11. (original): The process for producing fine metal oxide particles according to claim 9 wherein the metal alkoxide is a metal methoxide, ethoxide, n-propoxide, i-propoxide, n-butoxide, sec-butoxide, tert-butoxide or t-amylxoxide.

12. (original): The process for producing fine metal oxide particles according to claim 9 wherein the β -diketone metal complex is a metal complex of 2,2,6,6-tetramethylheptane-3,5-dione, 2,6-dimethyl-3,5-heptanedione or 2,4-pentanedione.

13. (withdrawn): The process for producing fine metal oxide particles according to claim 3 wherein the solvent of the organometallic compound solution is at least one solvent selected from methyl alcohol, ethyl alcohol, propyl alcohol, butyl alcohol, tetrahydrofuran, dimethyl sulfoxide, dimethylformamide, hexane, cyclohexane, methylcyclohexane, dioxane, acetone, ethyl acetate, butyl acetate, methyl isobutryl ketone, diethyl ether, t-butyl methyl ether, acetyl acetone, diisobutryl methane and dipivaloyl methane.

14. (previously presented): The process for producing fine metal oxide particles according to claim 1 wherein the combustion temperature is not lower than 400°C.

15. (previously presented): The process for producing fine metal oxide particles according to claim 1 wherein the oxidizing substance is used in a molar amount of from 0.5 to 40 times the molar amount of oxygen required for complete oxidization of the organometallic compound and the solvent of the organometallic compound solution.

16. (previously presented): The process for producing fine metal oxide particles according to claim 1 wherein the fine metal oxide particles produced have a number average particle diameter of not more than 100 nm.

17. (previously presented): The process for producing fine metal oxide particles according to claim 1 wherein the fine metal oxide particles produced are phosphors.

18. (currently amended): The process for producing fine metal oxide particles according to claim 17 wherein the phosphor is at least one red phosphor selected from $Y_2O_3:Eu$, $(Y, Gd)_2O_3Y_{2x}Gd_{2(1-x)}O_3:Eu$, wherein $0 < x < 1$ $YBO_3:Eu$ and $(Y, Gd)BO_3Y_xGd_{(1-x)}BO_3:Eu$, $0 < x < 1$.

19. (currently amended): The process for producing fine metal oxide particles according to claim 18 wherein the boron source of $YBO_3:Eu$ or $(Y, Gd)BO_3Y_xGd_{(1-x)}BO_3:Eu$ is a borate, wherein $0 < x < 1$.

20. (currently amended): The process for producing fine metal oxide particles according to claim 17 wherein the phosphor is at least one green phosphor selected from $Y_2O_3:Tb$, $Zn_2SiO_4:Mn$ and $(Mg, Sr, Ba)Al_{12}O_{19}Mg_xSr_yBa_{(1-x-y)}Al_{12}O_{19}:Mn$, wherein $0 < x < 1$, $0 < y < 1$ and $x+y < 1$.

21. (currently amended): The process for producing fine metal oxide particles according to claim 17 wherein the phosphor is at least one blue phosphor selected from $Y_2O_3:Tm$ and $(Ba, Mg)Al_{10}O_{17}Ba_xMg_{(1-x)}Al_{10}O_{17}:Eu$, wherein $0 < x < 1$.

22. (withdrawn): The process for producing fine metal oxide particles according to claim 1 wherein the fine metal oxide particles produced are conductive materials.

23. (withdrawn): The process for producing fine metal oxide particles according to claim 22 wherein the conductive materials comprise tin oxide or tin oxide added indium oxide.

24. (withdrawn): The process for producing fine metal oxide particles according to claim 1 wherein the fine metal oxide particles produced are ferroelectric substances.

25. (withdrawn): The process for producing fine metal oxide particles according to claim 24 wherein the ferroelectric substances comprise barium titanate, strontium titanate, lead titanate, barium strontium titanate, lead zirconium titanate, lead lanthanum zirconium titanate or strontium bismuth tantalum oxide.

26. (withdrawn): The process for producing fine metal oxide particles according to claim 4 wherein the solvent of the organometallic compound solution is a combustion improver.

27. (withdrawn): The process for producing fine metal oxide particles according to claim 4 wherein the solvent of the organometallic compound solution is at least one solvent selected from methyl alcohol, ethyl alcohol, propyl alcohol, butyl alcohol, tetrahydrofuran, dimethyl sulfoxide, dimethylformamide, hexane, cyclohexane, methylcyclohexane, dioxane, acetone, ethyl acetate, butyl acetate, methyl isobutryl ketone, diethyl ether, t-butyl methyl ether, acetyl acetone, diisobutryl methane and dipivaloyl methane.